Debit Card Billing System

The present invention relates to a debit card billing system for checking or other banking institution accounts.

5   ## Background of the Invention

Modern consumers have become accustomed to the safety and convenience of making purchase transactions at remote points of sale using credit cards instead of cash. Credit cards allow a consumer to make purchases on credit accounts in which a credit card issuing institution records purchases to a consumer's

10   account and then sends a monthly billing statement to the consumer. If the consumer elects not to pay off the entire balance of the account at the end of the billing cycle, then the credit card issuing institution typically collects interest on the outstanding balance on the account.

In response to the success of credit cards, banking institutions such as

15   banks and credit unions have developed debit cards which can be used just like credit cards to make purchases. However, unlike credit cards, the purchases are immediately posted to the consumer's checking account as if the consumer had written a check. Therefore, the consumer is not required to pay a monthly statement because the funds to cover the purchase are taken immediately and directly from the

20   consumer's checking account.

Debit card accounts have drawbacks when compared to normal credit card accounts. There may be more than one cardholder drawing on an account such as in a joint checking account. With present debit account systems, using two debit cards for one account can result in overdrafts when both users unknowingly make debit

25   transactions during the same time period. Because both cards draw upon the same account just like checks, two users may inadvertently draw upon the same funds resulting in an overdraft.

In addition, the typical debit account user loses interest compared to a credit card user. Because debit card transactions are posted to the checking account in the same way as checks, a user can expect the checking account to be drawn upon within a few days of the debit transaction. Credit card accounts, on the other hand, allow

5   the user to keep funds in an interest bearing account until the end of a billing cycle before they are needed to pay the credit card bill. By waiting until the end of the month to pay a credit card bill, the credit card user receives interest on the funds for the remaining period of the billing cycle. Current debit card systems employed by banks, however, immediately debit the checking account just like a check would be

10   debited. Therefore, a current debit card user does not receive the added interest he might have gained by keeping the funds in the interest bearing account for the remainder of a billing period.

Summary of the Invention

       The present invention is a method and system for managing an account

15   for use by a banking institution which provides checking or savings account services. An account user is provided with a debit card which can be used to make debit transactions, each transaction being recorded by the bank but not billed to the account until after a billing cycle elapses and after the account user has been issued a billing cycle statement showing all credit transactions. The system automatically debits the

20   account for all debit transactions made during the billing cycle after a payment period elapses following issuance of the statement.

       The system has a number of advantages over prior checking account billing systems. First, the system combines into one card the ability to make automated banking transactions on an account with the ability to make debit purchases

25   against the account. Although prior billing systems employ debit cards with financial accounts, these systems do not defer the time of payment as would a credit card account. The present system actually defers the time of payment as a credit card

2

account would, but combines this ability with the convenience of a banking card tied to a particular financial account.

The system also overcomes a problem associated with joint accounts. All debit transactions made with the transaction cards issued on the financial account are stored in the system until the end of a billing cycle without being debited against the account. At the end of the billing cycle, all the debit transactions for the billing cycle are reported to the debit card account holders. The debit card account holders are able to review the debit transactions and have the opportunity to supply additional funds or alternative sources of payment other than a direct debit to the account. In this way, joint checking account holders can avoid inadvertent overdrafts.

In addition, through the present system, the debit card account holder receives the advantage of accruing interest on funds which remain in the account during the time that elapses between the debit transaction and the actual debiting of the account for the transaction. Because the system defers debiting the account for the debit transactions until after the billing cycle and after a payment period following the billing cycle, the debit card account holder is able to capture the interest earned on funds which remain in the account during the deferred period.

Brief Description of the Drawings

FIG. 1 is a schematic flow chart of a debit transaction authorization process in accordance with the preferred embodiment of the present invention.

FIG. 2 is a schematic flow chart of a debit transaction settlement process in accordance with the preferred embodiment of the present invention.

FIG. 3 is a schematic flow chart of the statement and debit process in accordance with the preferred embodiment of the present invention.

FIG. 4 is a schematic diagram of the components of a computer system for implementing the present invention.

FIG. 5 is a schematic diagram of a networked computer managing system for implementing the present invention.

Detailed Description of the Preferred Embodiment

The present system for managing a financial institution account, such as a checking or savings account, combines the monthly billing schedule of a credit card account with the automatic debiting of a debit account to provide an account

5   holder with greater flexibility and control over cash management. The system includes a transaction card which the account holder can use to make automated banking transactions as well as debit transactions. Greater flexibility as well as convenience is afforded the debit card account holder by the system in that debit transaction information is accumulated and stored for a billing cycle period without

10   being posted against the funds in the account. At the end of the billing cycle a report or statement of debit transactions is produced for the debit card account holder's review. Only after a predetermined payment period elapses after producing the statement is the account automatically debited for all debit transactions of the billing cycle.

15   FIGS. 1 and 2 show a debit transaction authorization process and a debit transaction settlement process respectively. In a typical debit transaction, there are a number of parties involved. The transaction involves a consumer or debit card account holder with a debit card 2, a merchant with a point of sale processor 4, a debit card issuing financial institution 10 which issued the debit card for use with the

20   consumer's account, a credit institution 6 such as VISA or MASTERCARD, and often an intermediary clearinghouse or debit processing service 8. The debit card issuing financial institution 10 may be any bank, credit union or similar institution at which the consumer or account holder has opened a checking, savings, or other financial account.

25   A debit transaction occurs in two phases or steps. Typically, the first phase is an authorization phase. The authorization process is shown in FIG. 1. In the authorization phase the merchant 4 obtains verification and authorization from the debit card issuing financial institution 10 that the debit card 2 is valid and that the user has not exhausted a deferred purchase periodic limit. The authorization phase

4

occurs before the merchant 4 allows the consumer to make the purchase. The second phase is typically a settlement phase. The settlement phase is shown in FIG. 2. In the settlement phase funds are eventually transferred from the consumer's account at the financial institution to the merchant.

5   In the authorization phase of the present system, the debit card user first presents a debit card 2 to the merchant 4 in order to make a purchase. The merchant swipes the card through a point of sale processor which reads account information encoded on card 2 and combines it with information such as the date and the amount of the purchase and merchant identification. The point of sale system

10   transmits the debit transaction information to the credit institution 6 identified by the card 2 such as VISA.

The credit institution 6 then identifies the card issuing financial institution 10 and transmits the debit transaction information to the card issuing financial institution 10 either directly or through a debit processing service 8. The

15   information is received by the card issuing financial institution 10 by a managing computer system 50 as shown in FIG. 4. The information may be received by the computer system via a receiver system 40 which typically employs high speed dedicated communication lines. After identifying an account corresponding to the debit card 2 being used, the managing computer system 50 runs verifications against

20   the identified account to determine whether the debit transaction should be authorized. The account status is verified 12 as a valid, open account that has not been put on hold. The amount of the purchase is checked against a deferred debit purchase monthly spending limit 14. The deferred debit purchase spending limit is the amount in debit purchases the debit card account holder is permitted to make each month and

25   may be, for example, between $1,000 and $20,000.

Upon approval by the card issuing financial institution 10, an authorization record is stored 16 in the managing computer system's memory system 44, noting the debit transaction information. An authorization signal is then sent back

from the card issuing financial institution 10 through the credit institution 6 to the merchant's point of sale processor 4 where the debit transaction is authorized.

The settlement phase begins when the merchant 4 or the merchant's bank 20 requests payment from the credit institution 6 to cover the debit transactions authorized by the card issuing financial institution 10. Typically, at the end of a business day a merchant 4 will total the debit transactions performed and request payment from the credit institution 6. The credit institution 6 pays the merchant 4 and demands payment from the card issuing financial institution 10 by issuing a schedule or posting file 22 of all the transactions authorized by the card issuing financial institution 10. When the card issuing financial institution 10 receives the posting file, the financial institution's managing computer system 50 verifies each debit transaction listed against the authorization records stored when the authorization was given 24. Upon verification, the card issuing institution 10 makes payment to the credit institution 6. Shortly thereafter, in prior art systems, and typically through on-line or batch processing, the managing computer system debits the consumer's checking account for the amount of the transaction and eliminates the authorization record, thereby completing the debit transaction.

However, in the present system, the card issuing financial institution's managing computer system 50 is configured so that, during the settlement phase, after the receipt of the posting file 22, and after the card issuing financial institution 10 makes payment to the credit institution 6, the managing computer system 50 makes a deferred transaction billing record or history 26 without debiting the amount of the transaction against the consumer's account. The spending limit balance available is then updated 28 to reflect the purchase made.

A managing computer system 50 configured according to the present invention accumulates a billing record of all debit transactions for a billing cycle, typically one month, without debiting the consumer's account. The debiting of the account is deferred. In this manner a deferred transaction history is maintained for each account. As shown in FIG. 3, at the end of the billing cycle, the managing

6

computer system 50 recalls the billing history and issues a statement which includes a notice itemizing and totaling the deferred debit transaction history for the consumer's account. The statement shows an accrued debit balance for the billing cycle. Once the statement is issued to the debit card account holder 30, the billing cycle spending

5   limit is reset 32, allowing the debit card account holder to make additional deferred purchases for a new billing cycle. The statement may be made either through conventional hard copy reports or through electronic means. For example, the statement may be made available to the consumer by electronically posting the statement information at a secure site such as an internet site accessible by the account

10   holder's personal computer 56, or through an automated telephone service.

The managing computer system 50 includes a memory system 44. FIG. 5 shows how the memory system 44 may be divided into databases that may include an account database 60, a deferred history database 62, and an authorization record database 64. A record of authorization is made in the authorization record

15   database 64 during the authorization phase as described above. The record may then be recalled from the authorization record database 64 and a new record made in the deferred history database 62 during the settlement phase.

After providing a statement to the debit card account holder, the managing computer system initiates a payment period countdown 34. During the

20   payment period countdown the debit card account holder has the opportunity to designate or provide sources of payment to cover the debit transactions by supplementing the funds of the account itself or by designating another account. The account holder may transfer funds from a credit line or from funds outside the debit card issuing financial institution. The transfer may be accomplished by phone or even

25   electronically. Any payments made during the payment period are deducted from the accrued debit balance 36 which may be recorded in a deferred history database. When the payment period expires, the managing computer system automatically debits the debit card account or another designated account for the accrued debit balance 38. In one preferred embodiment the payment period is a period of fifteen

days. The debiting may be accomplished by recalling the deferred debit balance 38 from the deferred history database 62 and debiting an account database 60 as shown in FIG. 5.

The system may also be configured so that the debit cards may be used

5   in automated teller machines 54 to make automated banking transactions such as deposits and withdrawals. The managing computer system 50 according to the present invention may be configured to distinguish automated banking transactions from debit transactions wherein only the debiting of the debit transactions is deferred during the payment period. Accordingly, depending upon system configurations,

10   automated banking transactions either may be posted to the account during on-line or batch processing, or they may be deferred according to the present invention.

By combining debit card purchasing and deferred billing utilizing a single transaction card to accomplish both debit transactions as well as automated banking, a debit card account holder can reduce the number of cards needed to

15   perform all of these functions. Reducing the number of cards is not only more convenient for the debit card account holder but also decreases the risk of having multiple cards lost or stolen.

In summary, the present invention is directed to a deferred billing debit card system and method for managing an account at a financial institution. The

20   system and method are to be used in conjunction with a transaction card 2 which is encoded with computer-readable information identifying the financial institution 10 and the account at the financial institution 10. An account holder uses the transaction card 2 to make debit purchases and transactions. The system includes a receiver system 40 which may include high speed dedicated phone or communication lines for

25   receiving electronically transmitted debit transaction information generated by the account holder's use of the transaction card 2 in making a debit transaction. The debit transaction information is stored in a computer-readable memory system 44. A computer processor system 42 recalls the debit transaction information from the memory system 44 and aggregates the debit transaction information in a statement

showing an accrued debit balance 30 for a billing cycle. The computer processor system 42 automatically debits the account for the accrued debit balance 38 but not until after the end of the billing cycle and after the account holder is given an opportunity during a payment period 34 to provide a source of payment to cover all

5   or part of the accrued debit balance.

The present invention may be configured to include an output system 46 by which the billing system makes the statement available to the account holder. The output system 46 may include a printer system for generating hard copy statements to be sent by mail to the account holder or the statement may be made

10   available by electronic means via electronic mail or posting on a secure internet site.

The present invention may also be configured to work in conjunction with a transaction card that has also been encoded to be capable of use in automated banking transactions.

The present invention is to be limited only in accordance with the

15   scope of the appended claims, since persons skilled in the art may devise other embodiments still within the limits of the claims. For example, the features described in the present application are not limited to a bank but apply to other financial institutions such as a credit union, a trust company, a savings and loan association, or a savings association. Furthermore, the present systems and methods may be applied

20   to financial institution accounts beyond checking accounts, such as by designating payment of accumulated debit transactions against a savings account.